

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements relating to Dental Cleansing Outfits

I, RICHARD DEREK LAMPORT, of "Falcons", P.O. Box 180, Tzaneen, Transvaal Province, Union of South Africa, hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to dental cleansing outfits of compact and hygienic form. A dental cleansing outfit embodying the invention is of especial use to travellers who are constantly moving about and have to lunch away from the conveniences of home. The outfit is of simple construction and may be easily carried in a pocket or handbag.

An object of the invention is to provide a dental cleansing outfit adapted to hold a toothbrush and a liquid dental cleansing medium which can be applied to the brush, more especially, but not exclusively, where the liquid cleansing medium can be used without requiring the use of another wetting agent.

According to the invention a dental cleansing outfit comprises a tubular or like main container, and a closure cap therefor, said main container being longitudinally partitioned so as to provide on one side of the partition a compartment for a toothbrush or its handle, and on the other side a compartment constituting a liquid container or accommodating a removable liquid container, the latter container in both cases having an elastically-deformable wall adapted to be depressed for easy discharge of the liquid at an outlet.

The closure cap is preferably of hard plastic or like material adapted to accommodate the brush head and is screwed or otherwise fitted to the main container, and is provided with an inner flange, collar or the like for sealing the outlet of the liquid container when the device is not in use. Alternatively, the outlet for the liquid may have a separate closure member, in which case the inner

flange, collar or the like of the cap may be omitted.

The main container is preferably of cylindrical form, made in a single unit of elastically-deformable material such as polythene or any other suitable plastic or like material. However, it may also be made mainly of stiff or rigid material, subject to the liquid container having a deformable wall to facilitate discharge of its contents.

The partition may be edgewise sealed to, or integral with, side and end walls of the main container.

An end wall of the main container may be provided with openings both for entry of the brush handle and for the discharge of liquid from the liquid container.

The brush may be removed and the brush head appropriately positioned in relation to the discharge outlet for receiving the charge by squeezing the tubular deformable wall of the liquid container. Alternatively the latter may be constructed with its discharge outlet, e.g. in the form of a series of small orifices, directed towards the brush head when the brush is in position in the main container, in which case a charge may be delivered on to the brush head before the brush is removed, the outlet being provided in a projecting nozzle closed by a closure member. Alternatively, the outlet may comprise a series of marginal holes in a disc-like end member of the tube adapted to be sealed off by the inner collar or like of the cap.

The outfit may be made as a liquid dispenser to be discarded as such when its charge has been exhausted, in which case the liquid containing compartment may be permanently sealed save for the discharge outlet, but such compartment may also be provided at either end with a filling opening normally closed by a removable plug cap or other closure.

In one form of the invention the outfit is provided with a point at one end and with 90

vanes at the opposite end, whereby it has the appearance of a rocket missile, so that it can be used as a child's toy after the liquid has been dispensed.

- 5 In order that the invention may be more clearly understood and carried into effect, reference will now be made to the accompanying drawings in which like reference numerals refer to like parts throughout the several views.

In the drawings:—

Fig. 1 is a vertical cross-sectional elevation of one form of the main container constructed according to the invention and showing a toothbrush in position therein:

Fig. 2 is a part sectional plan view taken along the line II—II of Fig. 1;

Fig. 3 is a cross-sectional elevation of a cap closure for the main container shown in Fig. 1;

Fig. 4 is a vertical cross-sectional elevation of an alternative form of construction of the main container;

Fig. 5 is a full plan view of Fig. 4;

Fig. 6 is a cross-sectional elevation of a cap closure for the main container shown in Fig. 4; and

Fig. 7 is an elevation of the outfit adapted for use as a toy.

- Referring to the drawings, Figs. 1 to 3, the outfit comprises a tubular main container 1 partitioned off longitudinally into two compartments adapted to receive a toothbrush A and toothspray liquid B respectively, and provided with a cap closure for keeping it in a hygienic condition.

More particularly, the outfit consists of a tubular main container 1 of flexible, resilient material flat at either end and of sufficient length to easily accommodate the handle of an ordinary sized toothbrush A. The main container 1 is partitioned segmentally by a dividing wall 2 so as to leave just sufficient space 3 on the one side to receive the toothbrush handle. The remaining or larger section 4 provides a container for the liquid B and is completely enclosed with the exception of a number of small marginal holes 5 at the top end forming the liquid outlet. The upper, outer portion of the main container 1 is also threaded as at 6 to receive a covering cap 7.

The cap 7 is of similar sectional form to the rest of the main container 1 and is of sufficient length to accommodate the head of a toothbrush. It is threaded at its lower internal edge for fitting over the screw top 6 of the main container 1, and is fitted with an internal annular flange 8 above the innermost thread. This flange 8, when the cap 7 is screwed home, fits over the spray outlet holes 5 to prevent any leakage therefrom when not in use.

In its final assembled form the outfit is a cylindrical tube with flat ends, but if desired,

the ends may also be hemispherical or of any other convenient form.

When the outfit is required for use the cap 7 is unscrewed, and the liquid B applied on the bristles of the brush before or after the latter is removed for use. The container is of flexible form so that the spray may be forced out at the top with the aid of finger pressure on the container.

In an alternative form of construction as shown in Figs. 4 to 6 of the drawings the liquid container 9 is of elastic tubular form separate from the main container 1a and adapted to be securely retained therewith. In this case the main container 1a may be of rigid or resilient material, and is provided with a partition wall 10 of arcuate form so as to reduce the space 11 required for the toothbrush handle and leave a maximum amount of space for the liquid container.

The container 9 is secured to the main container 1a by means of upper and lower bands 12 and 13 respectively, disposed towards its end regions. These bands form continuations of the main container perimeter, thereby providing it with marginal end regions of circular plan form. The upper band 12 is open at its top and bottom for receiving the upper part of the container 9 and together with the upper end of the main container is screw threaded as at 14 to receive the coacting cap closure 15.

The bottom part 16 of the lower band 13 is closed off integrally with the main container 1a to form a smooth, continuous flat base to the outfit, so as to further ensure the container 9 being supported safely in position in the main container. In this case the liquid container 9 is provided with its own closure member 17, and once the liquid has been used up all that is required is to obtain a new container 9, it being unnecessary to dispense with the main container as in the previous construction. The cap 15 is only required to keep the brush clean and does not require an inner flange, although one may be provided without affecting the working of the outfit.

In order to adapt the outfit for use as a toy, as shown in Fig. 7, the cap 18 is of streamlined form terminating in a point while the opposite end 19 of the device is provided with vanes 20 integral with the main container. Alternatively, the vanes may be supplied as separate attachable members and a separate pointed cap provided.

Any suitable type of toothspray liquid may be used. Once the top is screwed on, apart from the liquid being sealed off, the brush is kept hygienically clean and cannot come in contact with any outside substances.

WHAT I CLAIM IS:—

1. A dental cleansing outfit comprising a tubular or like main container and a closure cap therefor, said main container being lon-

gitudinally partitioned so as to provide on one side of the partition a compartment for a toothbrush or its handle and on the other side a compartment constituting a liquid container or accommodating a removable liquid container. the latter container in both cases having an elastically deformable wall adapted to be depressed for easy discharge of the liquid at an outlet.

10 2. A dental cleansing outfit according to Claim 1 wherein the closure cap is adapted to accommodate the brush head and is screwed or otherwise fitted to the main container, and is provided with an inner flange, 15 collar or the like for sealing the outlet of the liquid container when the device is not in use.

3. A dental cleansing outfit according to Claim 1 wherein the liquid container is provided with a separate closure member.

4. A dental cleansing outfit according to Claim 1 or Claim 2 or Claim 3 wherein the partition is edgewise sealed to or integral with side and end walls of the main container.

5. A dental cleansing outfit according to any of the preceding claims wherein an end wall of the main container is provided with openings both for entry of the brush handle

and for the discharge of liquid from the liquid container.

6. A dental cleansing outfit according to Claim 1 wherein the liquid container is removable from the main container and is secured thereto by means of upper and lower bands disposed towards the end regions of the main container and forming continuations of its perimeter, the lower band having its bottom lower edge connected to the base of the main container to form a socket for the liquid container.

7. A dental cleansing outfit according to any of the preceding claims which is provided with a point at one end and with vanes at the opposite end, whereby the outfit has the appearance of a rocket missile.

8. A dental cleansing outfit according to any of the preceding claims wherein the outlet of the liquid container is disposed so as to deliver a charge of liquid on to the brush while the brush is still in position in the main container.

9. A dental cleansing outfit substantially as hereinbefore described with reference to Figs. 1 to 3 or Figs. 4 to 6 or Fig. 7 of the accompanying drawings.

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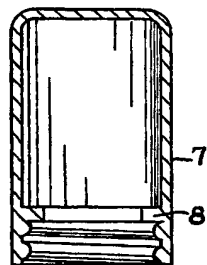


FIG. 3.

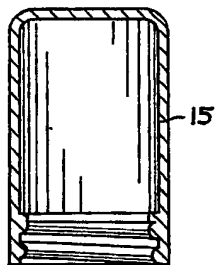


FIG. 6.

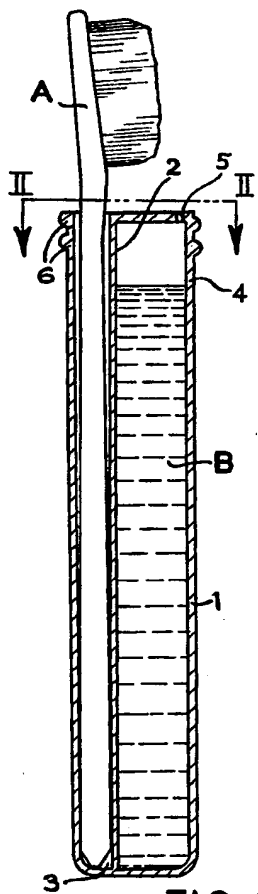


FIG. 1.

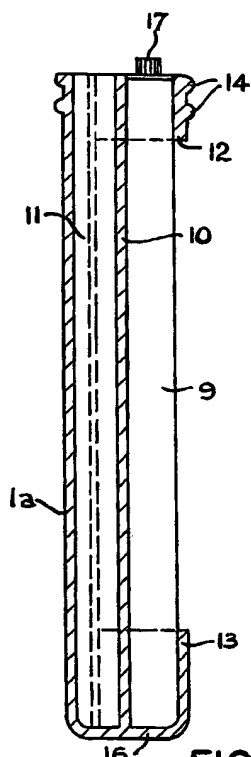


FIG. 4.

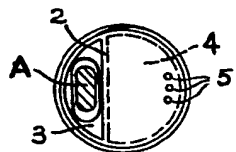


FIG. 2.

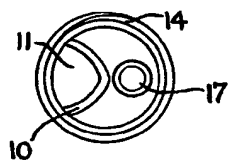


FIG. 5.

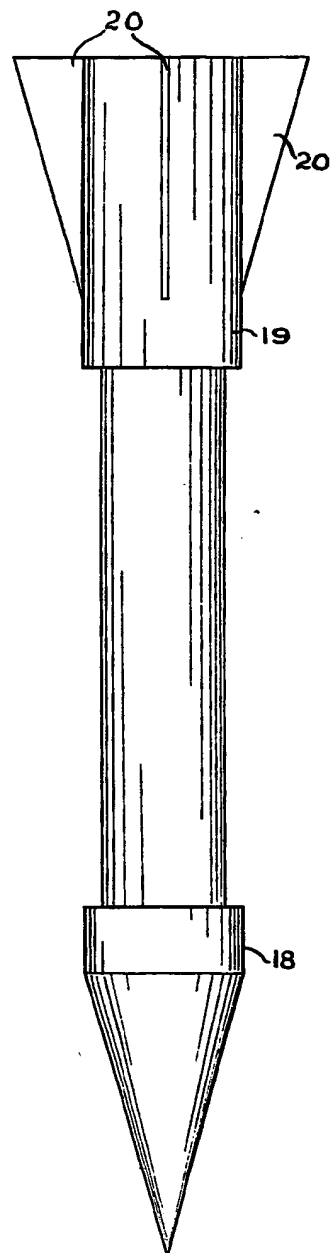


FIG. 7.